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GIPSY MOTH AND BROWN-TAIL MOTH INVESTIGATIONS

A. F. Burgess, Entomologist, in Charge

A number of the men of this Division attended the summer meeting of the northeastern entomologists held at Philadelphia and vicinity July 30 to August 1. Much interesting and helpful information was secured from the survey of the territory infested with the Japanese beetle and an inspection of the experiments under way. An excellent opportunity was given to examine many of the field experimental projects on insect pests affecting different crops in eastern Pennsylvania and southern New Jersey.

A. F. Burgess left field headquarters of the Division at Melrose Highlands, Mass., on June 14 for a trip to the Pacific coast. En route he visited a number of the stations and field projects of the Bureau and conferred with the entomologists in a number of the States. The experiment station and State entomologist's office was visited at Bozeman, Mont. A part of the area at Vancouver, B. C., where the satin moth has become established, was examined, and a number of places in the residential sections of Seattle, Wash., were inspected, where insecticides have been used to control the European earwig. From June 25 to 27 he attended a meeting of the Pacific Slope Branch of the American Association of Economic Entomologists, at Stanford University, Palo Alto, Calif. This was a very successful and enthusiastic meeting and many valuable papers were presented. After visiting the entomological department of the University of California, at Berkeley, and the Academy of Sciences at San Francisco, he proceeded to southern California. One day was spent at the Bureau laboratory at Alhambra and in visiting field projects connected with its work, and another day was occupied in visiting a number of county parasite stations, where natural enemies of citrus insects are being reared on a wholesale scale for field liberation. The entomological department of the Citrus Experiment Station at Riverside was visited and an opportunity was afforded to see the plant and equipment used in connection with parasite investigations. At Salt Lake City a day was spent at the alfalfa weevil laboratory of the Bureau, where the work on this insect and the parasite introduction and investigation work were examined. In company with Messrs. Edmonston and Hofer, of the Forest Insect Branch of the Bureau, an inspection trip was made to the Kaibab National Forest, where extensive work was being carried on to control a severe outbreak of Dendroctonus in the pine forest. Several crews of men were engaged in felling and peeling infested trees. In certain sections large areas of pine have been killed as the result of the work of this insect, and the whole forest, covering many hundreds of square miles, is threatened. Mr. Burgess takes this occasion to express his thanks to the entomologists whom he met on this trip for the many courtesies extended and the opportunities that were given him for seeing the important projects in the districts visited.

The foreign gipsy moth (Porthetria dispar L.) parasite investigations have been continued during the season of 1924. S. S. Crossman, R. T. Webber, and S. M. Dohanian went to Europe in the latter part of February in search of gipsy moth parasites for introduction into the infested area of the United States.

After spending a few days at Paris, interviewing several entomologists, Messrs. Crossman and Dohanian proceeded to Spain, and Mr. Webber went to Poland and Hungary.

Several medium to heavy gipsy moth infestations were visited in Spain, and through the kindness of Dr. M. Aullo, Director of the Laboratory of Forest Fauna of Spain, arrangements were made to use two of his field stations for the season. Mr. Dohanian remained in Spain during the season to carry on the investigations.

Messrs. Crossman and Webber spent most of the season in Poland, Hungary, Yugoslavia, and Bulgaria. After finding suitable infestations in each of these countries temporary field laboratories were established. In addition to these countries, parts of Rabat and Algiers in northern Africa, France, Austria, Germany, Roumania, Czecho-Slovakia, Sardinia, and Sicily were searched for P. dispar infestations.

No infestations of suitable size for parasite introduction work were found in the latter-named countries, excepting in Algiers and Rabat. Arrangements were made at Algiers to have shipments of gipsy moth larvae sent to Melrose Highlands during the season. At Rabat a heavy infestation was found, and Dr. Liouville, Director of the Institut Scientifique Cherifien, planned to have a study of the parasites of P. dispar made at Rabat this summer. Should this investigation show any valuable gipsy moth parasites present which have not already been introduced into America, arrangements can be made to carry on such work.

During the spring and summer about 85,000 tachinids were sent to Melrose Highlands. Of these importations, about 50,000 are Parasetigena segregata Rond., and 19,000 Blepharipa scutellata R. D. These two species have only one generation each year, and they have been placed in hibernation at the laboratory. The remaining material is composed of species having more than one generation annually, and in most cases the adults had issued and died before reaching Melrose Highlands. The species involved are Sturmia gilva Hartig, Carcelia gnava Meig., Compsilura concinnata Meig., and Tricholyga grandis Zett. In addition a few specimens of Chalcis intermedia Nees, and a few cocoons of a species of Hyposoter, Apanteles fulvipes Hal., A. vitripennis Hal., and A. melanoscelus Ratz. were sent to Melrose. Also about 1,000 adults of Carabus sp.? Reiche and a few Calosoma inquisitor L. were sent to the laboratory. A few adults of Silpha quadripunctata L. were shipped, but all were dead when received in the States.

S. S. Crossman and S. M. Dohanian returned to the Gipsy Moth Laboratory in August and R. T. Webber will return early in September.

FOREST INSECT INVESTIGATIONS

F. C. Craighead, Entomologist, in Charge

On July 28 J. C. Evenden reported that spraying operations against the larvae defoliating lodgepole pine in the Yellowstone National Park began July 24,

and to the present time 3-1/2 miles have been covered. Mr. Burgess's large power sprayer is used. With high pressure, it can throw the spray 200 feet. The edge of the timber is being followed, rather than the road, and the timber is being sprayed in a strip 100 to 150 feet wide. An examination of the trees sprayed the first day showed no insects at all, whereas the unsprayed trees contained many insects. Apparently all the sawfly larvae will be killed, though the spraying does not seem effective against the needle miner, or tyer. This is the first extensive spraying of forest trees, and of course is possibly practicable only under park conditions.

William Middleton recently visited an estate at "Westend," near Gordonsville, Va., where some old Dutch elms have been repeatedly infested by the elm leaf-beetle. The infested trees are in very poor condition, owing to the ravages of the beetle, but the location seems ideal in its isolation and climate for an attempt to introduce some of the elm leaf-beetle parasites from Europe and establish them in this country. Dr. W. R. Thompson, of the Division of Cereal and Forage Insect Investigations, expects to send some elm leaf-beetle parasites to this country for such colonization in the near future if conditions in France enable him to secure them in quantity. After the visit to "Westend," Mr. Middleton went to "Castle Hill," near Cobham, Va., to examine for insects a tremendous box hedge on the estate, and to advise on the treatment of the tulip trees infested by the borer.

On August 4 Leslie W. Orr was appointed Temporary Field Assistant under the direction of Dr. S. A. Graham, of the University of Minnesota. He will assist in investigations of defoliation of forest trees by the jack pine sawfly and spruce budworm.

CEREAL AND FORAGE INSECT INVESTIGATIONS

G. A. Dean, Senior Entomologist, in Charge

W. R. Walton, Acting in Charge of this Division, attended the meeting of the Northeast Section of the American Association of Economic Entomologists, beginning July 30 at Riverton, N. J. Mr. Walton reports a large and enthusiastic attendance and that an excellent opportunity was afforded for a general view of the Japanese beetle work and other important projects under way in that general region.

C. N. Ainslie visited Beach, N. Dak., during early August in order to investigate a severe infestation of the Hessian fly in western North Dakota. He found the insect more numerous and injurious than has been the case for many years, and was able to accumulate a valuable series of notes relating to the insect and its parasites in an unusual environment.

D. J. Caffrey, in charge of the corn borer investigational work, made a tour of inspection throughout the infested area during the latter part of August, spending several weeks visiting and inspecting the various laboratories and the more recently infested sections of the Lake district.

L. B. Sanderson, formerly employed as Field Assistant in Insect Control, resigned from the service, effective June 30, 1924, because of ill health.

E. V. Walter, Assistant at the Tempe, Ariz., laboratory, visited eastern Arizona about the middle of August in a search for the southwestern corn borer. He visited all accessible points from Tempe eastward and northward as far as Winslow and Holbrook, Ariz., without finding any trace of the insect.

Prof. Geo. A. Dean attended the meeting of the Northwest International Committee on Farm Pests, held at Bozeman, Mont., August 27 and 28. Prof. Dean also spent some time with Mr. Stewart Lockwood inspecting grasshopper and cricket infestations in Montana.

BEE CULTURE INVESTIGATIONS

E. F. Phillips, Apiculturist, in Charge

E. F. Phillips and James I. Hambleton attended the Sixth Annual Wisconsin Beekeeping Chautauqua held this year at Fond du Lac, August 11 to 13, which was attended by some 400 beekeepers. In recognition of his assistance during this and the five previous sessions, the Wisconsin State Beekeepers' Association presented Dr. Phillips with a silver coffee service. George S. Demuth, formerly with the Bee-Culture Laboratory, but now editor of "Gleanings in Bee Culture," was also presented with a similar silver set.

W. J. Nolan will attend a meeting of the North Carolina State Beekeepers' Association at Winston-Salem, September 10.

N. E. Phillips, of Erie, Pa., and J. J. Wilder, of Waycross, Ga., Editor of the Dixie Beekeeper, were recent callers at the Bee Culture Laboratory. Mr. Wilder is one of the most prominent beekeepers of the United States, owning and managing more than 10,000 colonies of bees.

Bruce Lineburg, who has been engaged in a study of the growth and feeding of the honeybee larva, has resigned his temporary appointment to accept a position as Instructor in Biology, Lake Forest College, Lake Forest, Ill.

E. W. Tschudi, who has been engaged in an investigation on color standards for honey, has resigned his position in the Bee Culture Laboratory, and is returning to his work at Johns Hopkins University.

STORED PRODUCT INSECT INVESTIGATIONS

E. A. Back, Entomologist, in Charge

A. O. Larson writes under date of August 13 that he had just returned from a Fathers' and Sons' outing at Big Bear Lake, Calif. By invitation he gave at the community camp fire a talk on insects, taking as his subject "Undesirable immigrants."

J. C. Hamlin spent the month of July visiting the principal dried-fruit sections of Washington, Oregon, and California. As a result he has chosen Fresno, Calif., as the most suitable place for starting the Bureau's investigation of insects attacking dried fruits.

Curtis Benton, a 1920 graduate of the University of Illinois, was appointed Junior Entomologist July 25. After a summer's field experience at Riverton, N. J., as field assistant in the green Japanese beetle work, he was in September, 1920, appointed plant quarantine inspector, Port Inspection Service, Federal Horticultural Board. He was assigned to the Port of New Orleans, and was temporarily in charge of the office during his last year of service. Mr. Benton resigned in September, 1922, to take graduate work at the University of Illinois, and received his master's degree in June, 1924. During the months of June to August, 1923, under the direction of Professor J. J. Davis, of Purdue, he conducted experiments with calcium cyanid for the American Cyanamid Company. Mr. Benton left Washington August 7 to assist J. C. Hamlin, at Fresno, Calif., in the dried-fruit insect investigations.

On August 20 Dr. E. A. Back was called to Philadelphia to advise regarding an outbreak of the webbing clothes moths, Tineola biselliella, in one of the largest yarn manufacturing plants in the east.

Dr. E. A. Back visited Wilmington, Del., August 29 to advise regarding an outbreak of the hide beetle, Dermestes vulpinus, which was threatening about half a million dollars' worth of raw Asiatic and European skins and finished leather.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Entomologist, in Charge

J. E. Graf recently visited the truck-crop and Japanese beetle laboratories at Riverton, N. J., and conferred with Bureau officials there. Plans were made with D. E. Fink regarding his future work on truck-crop insects.

N. F. Howard, entomologist in charge of the Mexican bean beetle investigations, Birmingham, Ala., visited Columbus, Ohio, for the purpose of conferring with Dr. D. M. DeLong, in charge of the temporary substation at Columbus, regarding the northern spread of the Mexican bean beetle.

H. L. Weatherby, field assistant, connected with the Birmingham laboratory, made a scouting trip through the Carolinas, Virginia, West Virginia, and southwestern Pennsylvania, for the Mexican bean beetle. The beetle was found in Washington and Green Counties, Pennsylvania, as well as in several counties, previously reported as infested, in the other States mentioned.

Appointments, etc.

T. E. Bronson's temporary appointment has been extended for an additional three months in order that he may complete important and promising experiments on the control of truck-crop insects. He has been conducting this work in Wisconsin under the direction of J. E. Dudley, entomologist in charge of the laboratory at Madison.

W. B. Wheelis, Junior Entomologist, who has been connected with the Mexican bean beetle laboratory at Birmingham, Ala., has resigned his position there to take up vocational work in Arkansas.

Wallace Colman has been appointed Junior Entomologist, to serve in connection with the Mexican bean beetle work, and will be stationed at Birmingham, Ala., under the direction of N. F. Howard. Mr. Colman received his master's degree from Cornell University and has since taken additional special work at Iowa State College.

Walter Baldin has been given a temporary appointment as field assistant. He will aid Mr. Stahl, in charge of the Riverside, Calif., laboratory, in caring for experimental plantings of selected sugar beets, etc.

SOUTHERN FIELD CROP INSECT INVESTIGATIONS

J. L. Webb, Entomologist, Acting in Charge

F. C. Bishopp, who was in charge of the Washington office the greater part of the month, left in the last week by automobile for Jacksonville, Fla., en route to Dallas, Tex. On the way he will make observations on insects injurious to domestic animals and to cotton.

J. L. Webb returned to Washington August 19, after visiting several field stations in Texas and Louisiana, where he investigated the status of the "cotton hopper" (Psallus seriatus).

T. C. Barber made a trip into Mexico recently for the purpose of collecting and making observations on insects injurious to cotton and sugar cane, and which are likely to be introduced into the United States.

A. C. Morgan, of the Clarksville laboratory, accompanied by R. G. Mewborne, who is working upon the chemotropism of the tobacco plant, made a trip to Tallulah and Mound, La., for the purpose of conferring with Mr. Coad and Dr. King on the chemotropism work. Dr. Hunter and J. L. Webb also attended the conferences.

S. T. Howard, formerly professor of mechanical engineering at Clemson College, S. C., and for the past few years employed as mechanical engineer at the boll weevil laboratory, Tallulah, La., has resigned his position there. During his employment in the Department he has aided very materially in the development of cotton-dusting machinery.

The following temporary employees have resigned their positions: C. P. Barber, R. M. Foster, H. S. Hollingsworth, J. M. Hyman, LeRoy Johnson, J. G. Lewis, E. E. Lumpkin, L. G. McCraw, D. A. McIntosh, A. H. McMullen, B. J. Nuckols, P. J. Pace, R. A. Robinson, J. G. Sevier, F. A. Smith, P. E. Stephens, J. C. Wilkerson, and R. D. Williams.

FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Senior Entomologist, in Charge

M. A. Yothers of the Yakima, Wash., laboratory, was in southern Idaho August 11 to 13, at the request of Prof. M. L. Dean, Director of Plant Industry for Idaho, investigating a serious outbreak of the snowy tree cricket (Oecanthus niveus DeG.), which is injuring prunes.

At Yakima, Wash., band material of the second brood of the codling moth has yielded a much larger number of parasites (Ascogaster carpocapsae Vier.) than were obtained from the first brood. About 25 adults have been reared from material collected during June and July. Of approximately 900 codling moth larvae collected from eight banded trees during the first half of August, 90, or 10 per cent, were parasitized.

Fred E. Brooks, in charge of the French Creek, W. Va., laboratory, discussed the more important insect enemies of northern nuts before a meeting of the Northern Nut Grower's Association held in New York City September 3 to 5.

Alfred Lutken, a graduate of the Agricultural and Mechanical College of Mississippi, has been appointed Plant Quarantine Inspector for duty at the Honolulu, Hawaii, station. Mr. Lutken has had two years' experience as Assistant Inspector for the State Plant Board of Mississippi.

GENERAL NOTES

Dr. Howard and Dr. Marlatt Attend Pan-Pacific Conference

Dr. L. O. Howard was in Honolulu, Hawaii, from July 23 to August 16, where he inspected the work of the Bureau's station and acted as chairman of the Pan-Pacific Food Conservation Conference, which was in session from July 31 to August 14. Distinguished scientists representing all the nations bordering on the Pacific ocean were in attendance, and many important problems dealing with the production, conservation, and transportation of food were discussed.

The entomologists from the mainland in attendance at the Conference, in addition to Doctor Howard and Doctor Marlatt, were Prof. T. D. A. Cockerell, Prof. Herbert Osborn, Dr. R. N. Chapman, and Prof. W. B. Herms. Mr. Frederick Muir was absent, recuperating in northern California from a severe illness, but Messrs. O. H. Swezey, D. T. Fullaway, E. M. Ehrhorn, C. E. Pemberton, F. X. Williams, H. F. Willard, and A. E. Lutkin well represented the Hawaiian Society.

Before the Honolulu meeting, Doctor Howard visited Seattle, Portland, Berkeley, San Francisco, Stanford University, Riverside, Whittier, Los Angeles, and Alhambra, visiting stations of the Bureau and interviewing State people concerning cooperative work. On his return from the Islands, he went to Portland and addressed the Chamber of Commerce on the subject of the work of the Conference and on the European earwig and the introduction of its European parasites which is being attempted at the present time. Two European tachinids, both of which are important earwig parasites, are being sent over from the south of England and from the south of France.

Dr. C. L. Marlatt and his family were in Honolulu during the latter part of July and the month of August, where he took a prominent part in the Pan-Pacific Food Conservation Conference, and investigated the methods of Federal plant quarantine enforcement in the Territory of Hawaii.

Items from the National Museum contributed by S. A. Rohwer

Dr. J. M. Aldrich, of the National Museum, has recently returned from a two months' trip in the West, in the course of which he collected insects in the San Bernardino Mountains, along the Pacific coast in western Oregon, in northern Idaho, in eastern Washington, and in the vicinity of Glacier National Park.

Dr. M. W. Blackman has completed his temporary assignment and has returned to Syracuse. During Dr. Blackman's service here he has arranged the entire collection of Scolytidae, placing most if it in trays, and has been able to do critical identification work on a few small groups. His work has brought the entire collection into a systematic sequence and has paved the way for critical study on all of the unidentified material. This collection has heretofore been housed in Schmitt boxes and cork-lined drawers. Its transfer to the trays will facilitate future work and make it possible to expand the collection and keep it in systematic order. The specimens belong-

ing to the genus Pityophthorus are being sent to Dr. Blackman, as he expects to undertake an extensive revision of the species of this genus.

Dr. Aldrich has been receiving for examination some types of Diptera of the older authors from the Vienna Museum in Austria. The fourth lot of these types has just been received and is being examined. The first two lots have been reported on in the Annals of the Entomological Society of America. Among the specimens received in these various lots are several which were collected about 100 years ago, and which formed a part of the collection of von Winthem, in Hamburg, where they were studied and described by the dipterist Wiedemann. In spite of their age, most of these specimens are well preserved. It appears that as far as known several of the species, including some very striking forms, have never been captured since that time, and are even yet represented only by the single original specimen. The privilege of borrowing these types is very highly appreciated.

LIBRARY

Mabel Colcord, Librarian

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